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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/542,714	04/04/2000	ALLAN HAVEMOSE	AMI 99 0006	5268

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[REDACTED] EXAMINER

VU, TUAN A

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/542,714	HAVEMOSE, ALLAN
	Examiner	Art Unit
	Tuan A Vu	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 04/04/2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 04/04/2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. This action is responsive to the application filed April 4, 2000.

Claims 1-20 have been submitted for examination.

Specification

2. The incorporation in the specification by reference to a foreign application or patent, or to a publication is not being helpful to the examiner, i.e. the incorporation of pending applications for reference as listed on page 2, e.g. "AMI 99-0005 ... EL 533 ...US", is not presented in a informative format. The examiner would like to ask the applicant to provide an updated list the so listed applications with a serial number format recognizable to the examiner, e.g. Attorney Docket Number should be replaced with the PTO application serial number.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Note: 35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

4. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamby et al., USPN: 5,848,274 (hereinafter Hamby).

As per claim 1, Hamby discloses a method for dynamic compiling, such method comprising loading byte code (col. 27, lines 42-45) on a digital processing processor, i.e. appliance as claimed; such byte code suitable for instrumentation such as having a tagged section (Note: structuring byte-code objects into symbol tables and symbol dependency reference pointers therein is equivalent to tagging code portions needed or not for additional compilation -- e.g. *code objects, boxes 4, 5, 6, Fig. 2b; col. 12, lines 48-57; Figs. 11-12*); identifying the recorded object, i.e. tagged section, of byte code referenced by the symbol table (col.15, lines 26-42; *Probe 7, symbol table 5, Imager 6, Fig. 2b*) and compiling (Fig. 18) such tagged section; wherein the tagged section is compiled when loaded (col. 12, lines 48-54) so as to enable the processor to utilize it without additional compiling (col. 9, lines 22-27, 45-50).

As per claim 2, Hamby further discloses encoding application source code in byte-code (col. 4, lines 30-37, Fig. 18), such byte-code suitable for further analysis (e.g. *resolve all references – col. 22, lines 41-65*); and tagging a section (col. 6, lines 32-46 – Note: recording byte-code derived symbols in tables is equivalent to tagging the byte-code for instrumentation and efficient compiling).

As per claim 3, Hamby further discloses that the byte-code is suitable for instrumentation (Fig. 2b; Fig. 16); suitable for further analysis including compiler optimization (Fig. 18; col. 12, lines 32-38); for interpreters (col. 28, 37-46), and for use in generating binary code (col. 28, lines 51-60; Fig.18) for the digital information processor.

As per claim 4, Hamby further discloses tagging byte-code (*persistent symbol table*, Fig. 2b) for performance sensitive instrumentation (col. 14, line 59 to col. 15, line 5; Fig. 1a-c).

As per claim 5, Hamby further discloses persistent storage of tagged sections of byte-code (col. 12, lines 27-30, 55-58).

As per claim 6, Hamby further discloses validating (*compiler 3000 interrogates* --- col. 27, line 42 to col. 28, line 6; Fig. 18) that the byte-code conforms with the byte-code suitable for the application of the digital information processor/appliance.

As per claim 7, Hamby discloses a digital information processor for dynamic compiling, comprising a processor for implementing a program; a memory for storing program instructions (col. 15, lines 18-24), said program having instructions to load byte-code (col. 27, lines 42-45), such byte-code being suitable for having a tagged section (e.g. col. 17, lines 16-25; *code object*, *boxes 4, 5, 6*, Fig. 2b; col. 12, lines 48-57; Fig. 11-12); identifying the tagged section (col.15, lines 26-42; *Probe 7, symbol table 5, Imager 6*, Fig. 2b), and compiling the tagged section (Fig. 18; col. 14, lines 32-42); wherein the tagged section is compiled when loaded (col. 12, lines 48-54) so to enable the tagged section to be utilized without additional compiling(col. 9, lines 22-27, 45-50).

As per claims 8-12, these are the processor apparatus version of claims 2-6 above, respectively, hence incorporates the corresponding rejections of those claims respectively.

As per claim 13, Hamby discloses a system for an execution environment suitable for dynamic compilation, comprising a memory device (*memory 54*, Fig. 2a,col. 15, lines 18-24); a loader coupled with the memory device for loading byte-code (*boxes 4, 5, 6*, Fig. 2b), such byte-code suitable for having a tagged section (col. 12, lines 44-54; Fig. 11-12); an

identifier coupled with the loader for identifying the tagged section (col.15, lines 26-42; *Probe 7, symbol table 5, Imager 6*, Fig. 2b); a compiler (e.g. *Extractor 9*, Fig. 2b; col. 13, lines 13-20; col. 14, lines 32-42) coupled with the identifier wherein the tagged section is compiled when loaded so to enable the tagged section to be utilized without additional compiling (col. 9, lines 22-27; 45-50).

As per claim 14, Hamby further discloses an encoding means to encode application source code to byte-code (col. 12, lines 23-38; Fig. 18) in an processor-independent form suitable for further analysis (e.g. *resolve all references* – col. 22, lines 41-65); a tagger, i.e. an intermediate code symbol reference table builder, for recording and referencing (i.e. tagging as claimed), the byte-code (e.g. col. 12, lines 55-60; col. 14, lines 32-42).

As per claims 15-17, these are the system claims set equivalent to the set of claims 3, 4, and 6, respectively, hence incorporate herein all the corresponding rejections therein.

As per claim 18, Hamby discloses a method for providing an execution environment in an information appliance/processor network (col. 4, lines 31-37; col. 29, lines 46-50), comprising encoding an application source code in a processor-independent byte-code (col. 12, lines 23-38; Fig. 18); tagging (*code object , boxes 4, 5, 6, Fig. 2b*; col. 12, lines 48-57; Figs 11-12) at least some portion of such byte-code; and compiling some portion of such tagged byte-code (e.g. *Extractor 9*, Fig. 2b; col. 13, lines 13-20; col. 14, lines 32-42; col. 9, lines 22-27).

As per claim 19, Hamby further discloses validating of portion of processor-independent byte-code (e.g. col. 21, lines 15-43; Fig. 11).

As per claim 20, Hamby further discloses identifying of the tagged portion of byte-code (e.g. col.15, lines 26-42; *Probe 7, symbol table 5, Imager 6*, Fig. 2b; Fig. 11).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat No. 6,186,677 to Angel et al., disclosing instrumenting byte-code with time stamps.

U.S. Pat No. 6,295,642 to Blandy, disclosing JIT partial compiling with locks.

U.S. Pat No. 6,044,220 to Breternitz, Jr., disclosing hash table for idioms of instructions to skip.

U.S. Pat No. 6,308,320 to Burch, disclosing hash values matching for incremental compile of byte-code.

U.S. Pat No. 5,230,050 to Iitsuka et al., disclosing using results set from intermediate previous compiling.

U.S. Pat No. 6,295,641 Beadle et al., disclosing JIT compiling using user's specified inputs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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or faxed to:

(703) 746-7239, (for formal communications intended for entry)

or: (703) 746-7240 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA. , 22202. 4th Floor(Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



VAT
January 6, 2003


John Chavis
Patent Examiner